

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In Re Application of:

Edward William ADAMS ET AL.

Continuation of Serial No.: 09/841,237

Group Art Unit: Unassigned

Filing Date: Concurrently herewith

Examiner: Unassigned

Title: SURFACE-MODIFIED SEMICONDUCTIVE AND METALLIC NANOPARTICLES  
HAVING ENHANCED DISPERSIBILITY IN AQUEOUS MEDIA

**INFORMATION DISCLOSURE STATEMENT**

Mail Stop Patent Application  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

This is an Information Disclosure Statement submitted for the Examiner's consideration. Applicants respectfully request that the Examiner review and make of record the references identified below.

The references identified below were disclosed and/or cited in parent application Serial No. 09/841,237, filed April 23, 2001, and, as such, copies thereof are not included pursuant to the provisions of 37 CFR § 1.98(d).

PTO-1449 form listing the references accompany this paper. Applicants would appreciate the Examiner's initialing and returning the forms to indicate that the references have been reviewed and made of record. The references are as follows:

U.S. PATENT DOCUMENTS		
Document No.	Issue Date / Publication Date	Patentee / Applicant
4,138,381	2/6/79	Chang et al.
4,504,618	3/12/85	Irvine et al.
4,715,986	12/87	Gruning et al.
5,110,505	5/5/92	Herron et al.
5,587,446	12/24/96	Frechet et al.
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6,048,616	4/11/00	Gallagher et al.
6,150,459	11/21/00	Mayes et al.
6,162,456	12/19/00	Dunbar et al.
6,319,426	11/01	Bawendi et al.

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Document No.	Issue Date / Publication Date	Patentee / Applicant
6,322,901	12/01	Bawendi et al.
6,326,144	12/01	Bawendi et al.
6,333,110	12/01	Barbera-Guillem
6,342,625	1/02	Kwetkat et al.
6,444,143	9/02	Bawendi et al.
6,468,808	10/02	Nie et al.

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Document No.	Publication Date	Country
WO 99/50916	10/7/99	PCT
WO 00/17642	3/30/00	PCT
WO 00/17655	3/30/00	PCT
WO 00/17656	3/30/00	PCT
WO 00/29617	5/25/00	PCT

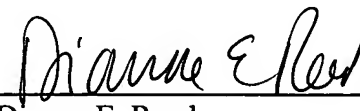
OTHER DOCUMENTS	
ANTONIETTI et al. (1997), "Amphiphilic Derivatives of Poly(Acrylic Acid) as Stabilizer in Emulsion Polymerisation," <i>Macromol. Rapid Commun.</i> <u>18</u> :295-302.	
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CARROT et al. (1999), "Synthesis and Characterization of Nanoscopic Entities Based on Poly(Caprolactone)-Grafted Cadmium Sulfide Nanoparticles," <i>Chem. Mater.</i> <u>11</u> (12):3571-3577.	
EKIMOV et al. (1981), "Quantum Size Effect in Three-Dimensional Microscopic Semiconductor Crystals," <i>JETP Lett.</i> <u>34</u> (6):345-349.	
INGRAM et al. (1997), "Poly-Hetero- $\omega$ -Functionalized Alkanethiolate-Stabilized Gold Cluster Compounds," <i>J. Am. Chem. Soc.</i> <u>119</u> (39):9175-9178.	
JOHNSON et al. (1998), "Influence of a Terminal Functionality on the Physical Properties of Surfactant-Stabilized Gold Nanoparticles," <i>Langmuir</i> <u>14</u> (23):6639-6647.	
KUMAR et al. (2000), "Phase Transfer of Aqueous CdS Nanoparticles by Coordination with Octadecanethiol Molecules Present in Nonpolar Organic Solvents," <i>Langmuir</i> <u>16</u> (24):9299-9302.	
LEFF et al. (1996), "Synthesis and Characterization of Hydrophobic, Organically-Soluble Gold Nanocrystals Functionalized with Primary Amines," <i>Langmuir</i> <u>12</u> (20):4723-4730.	
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MOFFITT et al. (1998), "Spherical Assemblies of Semiconductor Nanoparticles in Water-Soluble Block Copolymer Aggregates," <i>Chem. Mater.</i> <u>10</u> (4):1021-1028.	
PONCET-LEGRAND et al. (1999), "Rheological Behaviour of Colloidal Dispersions of Hydrophobic Particles Stabilised in Water by Amphiphilic Polyelectrolytes," <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> <u>152</u> :251-261.	

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PREMAÇHANDRAN et al. (1997), "The Enzymatic Synthesis of Thiol-Containing Polymers to Prepare Polymer-CdS Nanocomposites," <i>Chem. Mater.</i> <u>9</u> (6):1342-1347.
SASTRY et al. (1998), "Facile Surface Modification of Colloidal Particles Using Bilayer Surfactant Assemblies: A New Strategy for Electrostatic Complexation in Langmuir-Blodgett Films," <i>Langmuir</i> <u>14</u> (20):5921-5928.
SCHALLER et al. (1999), "Synthesis and Properties of Hydrophobically Modified Water-Borne Polymers for Pigment Stabilization," <i>Progress in Organic Coatings</i> <u>35</u> :63-67.
SHEN et al. (1999), "Bilayer Surfactant Stabilized Magnetic Fluids: Synthesis and Interactions at Interfaces," <i>Langmuir</i> <u>15</u> (2):447-453.
SIDOROV et al. (1999), "Stabilization of Metal Nanoparticles in Aqueous Medium by Polyethyleneoxide-Polyethyleneimine Block Copolymers," <i>Journal of Colloid and Interface Science</i> <u>212</u> :197-211.
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TRIBET et al. (1997), "Stabilization of Hydrophobic Colloidal Dispersions in Water with Amphiphilic Polymers: Application to Integral Membrane Proteins," <i>Langmuir</i> <u>13</u> (21):5570-5576.
WANG et al. (1999), "Synthesis of Polycarbonate-co-Poly( <i>p</i> -Ethylphenol) and CdS Nanocomposites," <i>Journal of Applied Polymer Science</i> <u>72</u> :1851-1868.

This Information Disclosure Statement is not intended as a representation that a search has been made, that additional information material to the examination of this application does not exist, or that any of the above references constitutes prior art to the present application within the meaning of 35 USC § 102.

As this Information Disclosure Statement is being filed concurrently with the application, no fee is required.

Respectfully submitted,

By:   
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Registration No. 31,292

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Substitute for form 1449A/PTO  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(use as many sheets as necessary)</i>			<b>Complete if Known</b>		
			Application Number	CON of Serial No. 09/841,237	
			Filing Date	Concurrently herewith	
			First Named Inventor	Edward William ADAMS et al.	
			Art Unit	Unassigned	
			Examiner Name	Unassigned	
Sheet	1	of	2	Attorney Docket Number	7725-0001.02

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	AA	4,138,381	2/6/79	Chang et al.			
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	AC	4,715,986	12/87	Gruning et al.			
	AD	5,110,505	5/5/92	Herron et al.			
	AE	5,587,446	12/24/96	Frechet et al.			
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	AN	6,333,110	12/01	Barbera-Guillem			9/13/99
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	AT	WO 00/17655	3/30/00	PCT			
	AU	WO 00/17656	3/30/00	PCT			
	AV	WO 00/29617	5/25/00	PCT			

OTHER DOCUMENTS — NONPATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), Title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T
	AW	ANTONIETTI et al. (1997), "Amphiphilic Derivatives of Poly(Acrylic Acid) as Stabilizer in Emulsion Polymerisation," <i>Macromol. Rapid Commun.</i> <b>18</b> :295-302.	
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Examiner Signature		Date Considered	
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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	BD	LEFF et al. (1996), "Synthesis and Characterization of Hydrophobic, Organically-Soluble Gold Nanocrystals Functionalized with Primary Amines," <i>Langmuir</i> 12(20):4723-4730.		
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